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PATENT  
Docket No. 2032.2.1

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: James L. Freeby, et al )  
Serial No.: 10/668,830 )  
Filed: September 23, 2003 ) Group Art  
For: **DEVICE FOR PROTECTING AN OBJECT FROM** ) Unit: 3635  
**ENCROACHING ELEMENTS** )  
Examiner: Basil S. Katcheves )

APPEAL BRIEF

Mail Stop Appeal Brief-Patents  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Examiner:

The Appellants filed a timely Notice of Appeal on July 14, 2005, which was filed in response to the Final Office Action mailed May 24, 2005. Appellants appeal the rejection of pending Claims 1-20.

This Appeal Brief is being filed under the provisions of 37 C.F.R. § 41.37. The filing fee set forth in 37 C.F.R. § 41.20(b)(2) of \$250.00 due to Appellants' small entity status is submitted herewith.

### **1. REAL PARTY IN INTEREST**

There is no real party in interest other than the inventors, as the inventors James L. Freeby and Alex Boyter have not assigned their invention.

### **2. RELATED APPEALS AND INTERFERENCES**

There are no related appeals, interferences, or judicial proceedings.

### **3. STATUS OF CLAIMS**

The Final Office Action rejected Claims 1-20. Claims 1-10, 12-14, 16-17, and 19 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 3,946,569 to Stuber (hereinafter "*Stuber*") in view of U.S. Patent No. 237,172 to Dentler (hereinafter "*Dentler*"). Claims 11, 15, and 20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Stuber* and *Dentler* in view of U.S. Patent No. 5,048,605 to Toon et al. (hereinafter "*Toon*"). Claim 18 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over *Stuber* and *Dentler* in view of U.S. Patent No. 6,399,544 to Fairchild et al. (hereinafter "*Fairchild*").

The claims remain rejected as set forth in the final rejection of May 24, 2005. The Examiner found Appellants' arguments unpersuasive. Appellants appeal the rejection of Claims 1-20.

### **4. STATUS OF AMENDMENTS**

No amendments have been submitted subsequent to the Final Office Action mailed May 24, 2005.

## 5. SUMMARY OF CLAIMED SUBJECT MATTER

The present invention involves fire barriers and methods for protecting an object against fire. *See* specification, paragraph 1. In particular, the present invention involves fire barriers and a method for protecting an object from encroaching elements. *See* specification, paragraph 8. Advantageously, the fire barriers and methods are environmentally-friendly, prevent water damage, inhibit foliage growth, and deter insects. *See* specification, paragraph 26.

Embodiments of the present invention include fire barriers and a method for protecting an object from fire. *See* e.g. Claims 1, 13, and 20. The fire barrier 100 of Claim 1 includes an organic bentonite-based material 104 and an outer boundary surface 106 disposed to retain the material 104 in a selected location, the location at least partially surrounding an object 102. *See* Figure 1, specification paragraph 25. In one embodiment, the bentonite-based material 104 comprises at least 50% bentonite. *See* Claims 13 and 20. The fire barrier of Claim 20 further includes the object being protected by the fire barrier 102. *See* Claim 20.

The top surface of the organic bentonite-based material 104 remains uncovered and exposed to the aboveground environment after being disposed within the outer boundary surface 106. *See* Figures 1-2 and Claim 1. The organic bentonite-based material 104 inhibits plant growth and thereby protects the object 102 from fire. *See* Claim 1 and specification, paragraph 26. The object 102 may be a utility pole, a fence, a building, or other object. *See* specification, paragraphs 25 and 32.

The material 104 may be disposed surrounding the base of the object 102. *See* specification, paragraph 28. The material 104 is disposed around the object 102 extending outward from the object 102 a predetermined distance. *Id.* Additionally, the material 104 is disposed around the object 102 to a predetermined depth. *Id.*

The organic bentonite-based mixture creates a hostile vegetation growth region about the object, absorbing water and maintaining a salinity level toxic to vegetation, thereby protecting the object from combustion of vegetation within the location. *See* specification, paragraph 26 and Claim 20.

A method for protecting an object from fire is also provided. *See* specification, paragraph 11 and Claim 13. In one embodiment, the method comprises preparing an area surrounding an object 102 for receiving an outer boundary surface 106, the area extending from the object 102 a

distance suitable to keep vegetation outside the area from igniting the object 102. *See* Claim 13. The method further includes disposing the outer boundary surface 106 to retain a material 104 in a location, the location at least partially surrounding the object 102. *Id.* The method also includes depositing an organic bentonite-based mixture 104 comprising at least 50% bentonite within the outer boundary surface 106, a top surface of the bentonite-based mixture remaining exposed to the aboveground environment after disposing the bentonite-based mixture 104 within the outer boundary surface 106. *Id.* The bentonite-based mixture creates a hostile growing environment for vegetation. *Id.*

Depositing the material 104 may comprise depositing the material 104 and forming an upward slope towards the object 102. *See* Claim 17. In one embodiment, depositing the material 104 comprises pumping the material 104 from a source. *See* specification, paragraph 12. Alternatively, depositing the material 104 may comprise shoveling the material 104 from the source. *Id.*

## **6. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

I. Whether the Examiner failed to establish a *prima facie* case of obviousness under 35 U.S.C. § 103(a) for Claims 1-10, 12-14, 16-17, and 19 where the limitations of the claims are not taught or suggested within the combination of *Stuber* and *Dentler*.

II. Whether the Examiner failed to establish a *prima facie* case of obviousness under 35 U.S.C. § 103(a) for Claims 11, 15, and 20 where the limitations of the claims are not taught or suggested within the combination of *Stuber*, *Dentler*, and *Toon*.

II. Whether the Examiner failed to establish a *prima facie* case of obviousness under 35 U.S.C. § 103(a) for Claim 18 where the limitations of the claims are not taught or suggested within the combination of *Stuber*, *Dentler*, and *Fairchild*.

## 7. ARGUMENT

I. The Examiner failed to establish a *prima facie* case of obviousness under 35 U.S.C. § 103(a) because *Stuber* and *Dentler*, either alone or in combination, do not teach or suggest all of the limitations of Claims 1-10, 12-14, 16-17, and 19.

### Claims 1-10, 12-14, 16-17, and 19

#### A. Independent Claims 1 and 13

Appellants respectfully submit that independent Claim 1 is representative of the novel subject matter of Claim 13. Appellants also submit that Claim 1 is patentable over *Stuber* and *Dentler* because *Stuber* and *Dentler* fail to teach each element of Claim 1. Claim 1 recites:

A fire barrier protecting an object comprising:  
an organic bentonite-based material;  
an outer boundary surface disposed to retain the material in a selected location,  
the location at least partially surrounding the object;  
wherein the organic bentonite-based material is disposed within the outer  
boundary surface such that a top surface of the material remains uncovered  
and exposed to the aboveground environment after disposing the bentonite-  
based material within the outer boundary; and the organic bentonite-based  
material forming a region about the object, the region configured to prevent  
plant growth and thereby protect the object from fire.

#### B. The Rejection under 35 U.S.C. § 103(a) in view of *Stuber* and *Dentler*

The Final Office Action mailed May 24, 2005 rejected Claims 1-10, 12-14, 16-17, and 19 under 35 U.S.C. § 103(a). The Final Office Action states:

Regarding claim 1 *Stuber* discloses a barrier (fig. 7:24) comprised of a bentonite material surrounding a pole (fig. 7:10). In addition, *Stuber* does not disclose the bentonite as being exposed to the above ground environment. *Dentler* discloses a pole protector ringed around a pole and located at ground level (fig. 2:D). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify *Stuber* by placing the protective bentonite rings at the ground surface, as disclosed by *Dentler* to

help firmly anchor the post to the ground (Dentler, lines 52-53). Applicant should note that although the prior art does not specifically disclose fire prevention, **the prior art is the structural equivalent of the basic claim structure and therefore, has the inherent capability of functioning as a fire stop as in the applicant's claims.**

Office Action, May 24, 2005, p. 2 (emphasis added).

C. Withdrawal of the Rejection under 35 U.S.C. § 103(a) in view of *Stuber* and *Dentler*

Appellants respectfully disagree with the Final Office Action's characterization of the teachings of *Stuber* and *Dentler*. As described immediately below, *Stuber* and *Dentler* fail to teach or suggest a fire barrier with the limitation of a "region configured to prevent plant growth and thereby protect the object from fire" as recited in Claim 1. Furthermore, *Stuber* and *Dentler* fail to teach or suggest the limitation of "an outer boundary surface disposed to retain the material in a selected location" also recited in Claim 1.

Additionally, the Examiner has combined *Dentler* and *Stuber* despite the lack of a motivation to combine and despite the fact that the combination of *Dentler* with *Stuber* changes the principle of operation of *Stuber*. Accordingly, the rejection of Claims 1-10, 12-14, 16-17, and 19 under 35 U.S.C. § 103(a) must be duly overruled.

Claim 1

The Examiner argues that the block disclosed by *Dentler* has the inherent capability of functioning as a fire stop. However, *Dentler*'s block does not inherently possess the claimed features of the present invention.

To establish inherency, an examiner must supply extrinsic evidence that "make[s] clear that the missing descriptive matter is **necessarily** present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill." *In re Robertson*, 169 F.3d 743, 745. MPEP §2112 p. 2100-54. Furthermore, "[i]n relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic **necessarily** flows from the teachings of the applied prior art." *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990). MPEP §2112 p. 2100-55. In establishing inherency, "[a] prior art reference **must be considered in its entirety**, i.e., as a whole, including portions that would **lead away** from the claimed

invention.” *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540 (Fed. Cir. 1983). MPEP §2141.02 p. 2100-127.

Appellants respectfully submit that the Examiner has not established that the block disclosed by *Dentler* inherently possesses the ability to operate as a fire barrier configured to prevent plant growth and thereby protect the object from fire. The Examiner has not provided reasoning that establishes that *Dentler*’s block inherently and **necessarily** acts as a fire barrier. Furthermore, the Examiner has not established that *Dentler*’s block is capable of preventing plant growth, thereby protecting the object from fire. In fact, when *Dentler* is considered in its entirety, *Dentler* teaches that the block cannot act as a fire barrier and cannot prevent plant growth. The teachings in *Dentler* **lead away** from an argument that the *Dentler* block prevents plant growth and thereby serves as a fire stop.

*Dentler* teaches a block “generally constructed of wood treated with coal-tar.” *Dentler*, Col. 1, lines 35-36. One of ordinary skill in the art would quickly recognize that wooden blocks are readily combustible and therefore cannot act as a fire barrier. Treating a wooden block with coal-tar further enhances the combustibility of the block. Thus, rather than teaching a fire barrier, *Dentler* teaches a block that is fuel for a fire.

*Dentler* also teaches a metal block. *Dentler*, Col. 1, lines 35-36. However, the Examiner may not rely on this metal block to inherently disclose a fire barrier. Prior art relied on to disclose an inherent feature must *necessarily* be present in the prior art reference. MPEP §2112 IV p. 2100-54. *In re Robertson*, 169 F.3d 743. Consequently, the inherent feature must *always* be present in the prior art reference. Since *Dentler* discloses both wooden and metal blocks, *Dentler* does not teach a block with the necessary inherent capability of acting as a fire barrier. “Inherency ...may not be established by probabilities or possibilities.” *Id.*

Furthermore, the block in *Dentler* fails to prevent plant growth as required in Claim 1. *Dentler* teaches a block “capable of sliding up and down on the post, [that] can be applied thereto or removed therefrom with ease and facility.” *Dentler*, Col. 1, lines 38-40. For the block to easily slide up and down the post, the block must necessarily comprise a void having a diameter larger than the diameter of the pole on which the block is slid. Otherwise, the block would not



be able to easily slide on the post. In fact, *Dentler* discloses that the block “fit[s] loosely on the post.” *Dentler*, Col. 1, lines 48-49.

Due to the diameter of the void in the block and the loose fit of the block around the post, a gap will necessarily exist between the block and the pole once the block is slid into position. The floor of the gap will be the ground on which the block rests. This gap provides a place where seeds may lodge and take root in the ground exposed by the gap. One of skill in the art will recognize that the gap need not be large to enable plant growth, as plants are capable of taking root in very small cracks. Thus, *Dentler* does not teach a block having the inherent capability of preventing plant growth. Instead, *Dentler*’s block necessarily forms a gap between the block and the pole since *Dentler* teaches a block “fitted loosely on the post” not a block fit precisely around the post. *Id.*

Appellants respectfully submit that the Examiner has not established that bracelets disclosed by *Stuber* inherently possess the ability to operate as a fire barrier configured to prevent plant growth and thereby protect an object from fire. The Examiner has not provided reasoning that establishes that *Stuber*’s bracelets inherently acts as a fire barrier and the Examiner has not established that *Stuber*’s bracelets are capable of preventing plant growth, thereby protecting the object from fire. In fact, when *Stuber* is considered in its entirety, *Stuber* teaches that the bracelets cannot act as a fire barrier and cannot prevent plant growth.

*Stuber* teaches bracelets covered with burlap and placed around a pole such that the bracelets are located under ground. *Stuber*, Col. 2, lines 51-52, Fig. 6, Fig. 8. Since *Stuber*’s bracelets are located under ground, the bracelets are not capable of acting as a fire stop because plants may easily grow in the earth fill placed on top of the bracelets during installation. Even if some portion of a bracelet was exposed, contrary to the teaching of *Stuber*, the bracelet would not prevent plant growth since one of skill in the art will recognize that seeds can take root in burlap. Furthermore, burlap is flammable, thus *Stuber*’s bracelets cannot act as a fire barrier. Consequently, *Stuber* does not teach bracelets having the inherent ability to operate as a fire barrier configured to prevent plant growth.

In contrast to both *Stuber* and *Dentler*, the claimed invention is a fire barrier configured to prevent plant growth and thereby protect an object from fire. *See* Claim 1. The claimed invention teaches a fire barrier comprising organic bentonite-based material disposed within an

outer boundary surface such that a top surface of the material remains uncovered and exposed to the aboveground environment. *Id.* The material serves as a fire break by preventing plants, which are flammable, especially when dry, from growing near the object because plants are not able to grow in the material. Additionally, the material itself is not flammable. Thus, the material provides a fire barrier by creating an area around the object free of flammable objects.

The claimed invention, when initially installed, absorbs water and swells to form a seal around the object. As a result, there are no gaps between the material and the object. In fact, the material forms a “water and chemical proof seal” preventing the presence of water between the material and the object. *See* specification, paragraph 26. Since the seal between the material and the object is water proof, it is necessarily free of gaps of the sort described above in relation to *Dentler’s* block. Thus, the claimed invention, unlike *Dentler’s* block or *Stuber’s* bracelets, is effective in preventing gaps in which plants may grow.

The combination of *Dentler* and *Stuber* fails to explicitly or inherently teach or suggest a fire barrier configured to prevent plant growth and thereby protect an object from fire. A *prima facie* case of obviousness requires that the prior art teach or suggest all claim limitations. MPEP §2143.03.

The Examiner argues that *Stuber* discloses a retaining device for retaining the material in a selected location. However, *Stuber’s* bracelet does not retain material in a selected location as required by Claim 1 of the present invention.

*Stuber* discloses a bracelet having a burlap or imperforate covering encasing a swelling agent. *Stuber*, Col. 2, lines 33-36. However, rather than retaining the swelling agent in a selected location, the burlap covering bursts as a result of the expansion of the swelling agent. *Stuber*, Col. 3, lines 1-2. Thus, *Stuber* fails to teach or suggest “an outer boundary surface disposed to retain the material in a selected location.” Rather, *Stuber* teaches away from a surface capable of retaining material in a selected location by teaching a covering designed to either enlarge or burst in order to let the swelling agent move from an initial location.

In contrast, the claimed invention provides a rigid boundary preventing the material from expanding beyond the boundary. Instead of expanding beyond the rigid boundary, when initially installed, the material expands upwards and towards the pole creating a water proof seal.

The combination of *Dentler* and *Stuber* fails to teach or suggest a retaining device for retaining the material in a selected location. A *prima facie* case of obviousness requires that the prior art teach or suggest all claim limitations. MPEP §2143.03.

Therefore, because *Dentler* and *Stuber* fail to teach or suggest each element of independent Claim 1, Appellants submit that Claim 1 is nonobvious over *Dentler* and *Stuber* alone, or in combination.

Furthermore, since neither *Dentler* nor *Stuber* teach or disclose a fire barrier configured to prevent plant growth and thereby protect an object from fire, there is no motivation to combine *Dentler* and *Stuber* to that end. “It is insufficient that the prior art disclose[s] the components of the patented device, either separately or used in other combinations; there must be some teaching, suggestion, or incentive to make the combination made by the inventor.” *Northern Telecom, Inc. v. Datapoint Corp.*, 908 F.2d 931, 934 (Fed. Cir. 1990). See e.g. *Interconnect Planning Corp. v. Feil*, 774 F.2d 1132, 1143, 227 USPQ 543, 551 (Fed.Cir.1985).

To establish *prima facie* obviousness, there must be some suggestion or motivation to modify the reference or to combine reference teachings to arrive at the claimed invention. “The teaching or suggestion to make the claimed combination . . . must be found in the prior art, not in applicant’s disclosure.” MPEP 2143, citing *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). “The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination.” See MPEP 2143.01, citing *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990).

*Dentler* and *Stuber* both teach devices and methods for installing posts. However, neither reference teaches nor discloses, either explicitly or implicitly, protecting an object from fire by preventing plant growth. In fact, as established above, neither *Dentler* nor *Stuber* are inherently capable of operating as a fire barrier. In view of this fact, no motivation can be found *in the prior art references* to combine *Dentler* with *Stuber* for a fire barrier configured to prevent plant growth and thereby protect an object from fire. See Claim 1. Furthermore, this motivation is not found in the knowledge of those of skill in the art or the nature of the problem. Applicants submit that one of skill in the art would dismiss *Dentler* and *Stuber* because these teachings fail

to solve the problem of providing a fire barrier as explained above. In addition, one of skill in the art would be lead away from combining *Dentler* with *Stuber* because *Dentler* teaches use of combustible materials which fail to properly seal against the post to prevent plant growth.

There must be some positive, concrete evidence which gives a logical reason that justifies a combination of primary and secondary references. *In re Laskowski*, 10 USPQ2d 1397 (Fed. Cir. 1989). The Examiner has not provided such positive, concrete evidence. Accordingly, Appellants assert that the rejection of Claim 1 under 35 U.S.C. § 103(a) must be duly overruled.

Additionally, the Examiner's proposed augmentation of *Stuber*'s bracelets with elements of *Dentler*'s block would significantly change the principle of operation of *Stuber*'s bracelets. If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. MPEP §2143.01 p. 2100-132. *In re Ratti*, 270 F.2d 810.

The Examiner suggests that *Stuber*'s invention could be modified by "placing the protective bentonite rings at the ground surface, as disclosed by *Dentler* to help firmly anchor the post to the ground." Final Office Action, May 24, 2005, p. 2. However, placing the protective bentonite rings (also referred to as bracelets in *Stuber*) at the ground surface would disable the principle on which *Stuber*'s invention is based.

*Stuber* relies on bracelets being placed around a post within a hole that is subsequently filled with fluid such as water, acid, or chemicals. *Stuber*, Col. 2, lines 37-39 and Figure 5. A protective coating or wrapping surrounds the bracelets. *Id.*, Col. 2, lines 34-36. *Stuber* teaches that the bracelets must be exposed to the fluid for a period of time sufficient to allow the protective covering of the bracelets to be dissolved. Once the protective covering is dissolved, the swelling agent is exposed to the fluid and consequently begins to swell. *Id.*, Col. 2, lines 38-43. The swollen bracelets provide a stable anchor for the post. *Stuber* teaches placing the bracelets in a hole dug into the ground. The hole contains the fluid and enables the fluid to have adequate contact with the protective coating to dissolve the protective coating. *Id.*, Figure 5, Col. 2, lines 52-68 and Col. 3, lines 1-2. The hole also serves to retain the swelling agent such that an anchor is formed.

If the bracelets were placed above ground, as suggested by the Examiner in combining *Stuber* and *Dentler*, the fluid would not be contained around the bracelets. Consequently, the protective covering of the bracelets would not be dissolved and the swelling agent would not swell around the post. Fluid could be poured over the bracelets. However, the fluid would drain away from the bracelets before making sufficient contact with the bracelets to dissolve the protective covering. Furthermore, pouring fluid over the rings would be impractical and potentially dangerous since the person pouring the fluid would be exposed to the fluid. *Stuber* teaches that the fluid may be acid, hot fluid, or chemicals, all of which are potentially dangerous. *Stuber*, Col. 2, lines 63-68.

*Stuber* gives no hint that such an above ground approach would be desirable. To the contrary, such a combination would render *Stuber*'s bracelets ineffective in compressing around a pole to keep the pole firmly in place. Accordingly, Appellants assert that the addition of the above ground element of *Dentler* to *Stuber* would disable the principle of operation, namely the swelling of the bracelets, relied on by *Stuber*.

Appellants assert for the foregoing reasons, namely failure to teach all claim limitations, lack of motivation to combine, and a combination of an element from a first reference with a second reference that changes the principle of operation of the second reference, the rejection of Claim 1 under 35 U.S.C. § 103(a) must be duly overruled.

### Claim 13

Claim 13 is directed at a method for protecting an object from fire. Execution of this method results in a fire barrier substantially similar to the like named fire barrier of Claim 1 described above. Therefore, Appellants submit that Claim 13 is patentable for at least the same reasons as Claim 1, given above.

The Examiner has failed to make a *prima facie* showing that *Stuber* and *Dentler*, either alone or in combination teach or suggest "an organic bentonite-based mixture comprising at least 50% bentonite." See Claim 13. In fact, the Examiner notes that the combined prior art "does not disclose specific percentages of bentonite." Final Office Action, May 24, 2005, p. 4. The Examiner notes that "[a]pplicant fails to show criticality for specifically claimed dimensions, therefore it would have been an obvious design choice to use the dimensions such as specified in

these claims.” Final Office Action, May 24, 2005, p. 4. Claim 13 specifies a mixture comprising at least 50% bentonite that creates a hostile growing environment for vegetation. *See* Claim 13.

Applicants respectfully submit that they have shown the importance of the percentage of bentonite used in the mixture. The mixture will not effectively prevent plant growth if the mixture does not comprise sufficient bentonite since bentonite provides the mixture with the characteristic of inhibiting plant growth. The specification teaches that one embodiment of the mixture is “*primarily* sodium bentonite” which “advantageously . . . provides an environment that prevents growth around the utility pole.” *See* specification, paragraphs 25-26.

Further, the specification teaches “the bentonite in the material 104 deprives seeds, roots, and plants of water and provides a salinity level which is detrimental to plant growth.” *Id.*, paragraph 26. In addition, Claim 13 itself discloses the importance of the percentage of bentonite in the mixture by reciting that the mixture comprising at least 50% percent bentonite creates a hostile growing environment for vegetation. *See* Claim 13.

*Dentler* does not teach the use of bentonite and thus cannot be relied on to show “an organic bentonite-based mixture comprising at least 50% bentonite” as required by Claim 13. *Stuber* teaches the use of bentonite, but as a “swelling agent” not as a plant growth inhibitor. *Stuber* does not teach the use of a mixture comprising a particular percentage of bentonite. Furthermore, *Stuber* does not teach the use of bentonite for inhibiting plant growth.

This is evidenced by *Stuber*’s teaching that bentonite, kaolin, gel, sodium montmorillonite or any montmorillonite clay, salts including sodium or calcium chloride, plastics which swell upon heating, or cement may be used as a swelling agent. *Stuber*, col. 2, lines 56-62. Not all of these substances inhibit plant growth. In particular, kaolin is commonly sprayed onto fruit trees to prevent insect damage to the tree without killing the tree or inhibiting the tree’s growth. Thus, *Stuber* does not teach the use of a swelling agent to inhibit plant growth. Furthermore, *Stuber* does not teach a percentage of bentonite adequate to inhibit plant growth and does not teach “an organic bentonite-based mixture comprising at least 50% bentonite” as required by Claim 13.

*Dentler* and *Stuber* fail to teach or suggest each element of independent Claim 13. In particular, *Dentler* and *Stuber* fail to teach “an organic bentonite-based mixture comprising at least 50% bentonite” as illustrated above, and fail to teach a “mixture creating a hostile growing

environment for vegetation” as illustrated above with respect to Claim 1. Accordingly, Appellants submit that Claim 13 is nonobvious over *Dentler* and *Stuber* alone, or in combination and request that the rejection of Claim 13 under 35 U.S.C. § 103(a) be duly overruled.

D. Dependent Claims 2-10, 12, 14, 16-17, and 19

Given that dependent Claims 2-10, 12, 14, 16-17, and 19 depend respectively from Claims 1 and 13, Appellants respectfully submit that Claims 2-10, 12, 14, 16-17, and 19 are also patentable over *Stuber* and *Dentler* for at least the reasons described above. Appellants request that the rejection of dependent Claims 2-10, 12, 14, 16-17, and 19 under 35 U.S.C. § 103(a) be duly overruled.

**II. The Examiner failed to establish a *prima facie* case of obviousness under 35 U.S.C. § 103(a) because *Stuber*, *Dentler*, and *Toon*, either alone or in combination, do not teach or suggest all of the limitations of Claims 11, 15, and 20.**

**Claims 11, 15, and 20**

A. Dependent Claims 11 and 15

Given that Claims 11 and 15 depend respectively, from independent Claims 1 and 13, which are believed to be patentable as described above, Appellants respectfully submit that the rejection of Claims 11 and 15 under 35 U.S.C. § 103(a) is moot. *Stuber* and *Dentler*, either alone or in combination, fail to teach or disclose a method for protecting an object from fire including “preparing an area surrounding an object . . . to keep vegetation outside the area from igniting the object” as described above. See Claim 13. A *prima facie* case of obviousness requires that the prior art teach or suggest all claim limitations. MPEP §2143.03.

*Stuber* and *Dentler* do not teach preparing an area to keep vegetation outside the area from igniting the object. As discussed above, *Dentler* teaches a block that is both susceptible to fire itself due to its composition of wood and coal tar and incapable of preventing vegetation growth due to gaps between the block and the pole. *Stuber* teaches a bracelet that is located below ground and therefore unable to prevent vegetation growth. Likewise, *Toon* does not teach the missing elements of *Stuber* and *Dentler* or preparing an area to keep vegetation outside the

area from igniting the object since *Toon* teaches a packing seal for use underground. *See Toon*, Fig. 3, Col. 4, lines 20-25 and lines 41-49.

Therefore, because *Stuber* and *Dentler* fail to teach each element of independent Claims 1 and 13 and the missing elements are neither taught nor suggested by *Toon*, Appellants submit that Claims 11 and 15 are nonobvious over *Stuber*, *Dentler*, and *Toon* alone, or in combination. Accordingly, Appellants request that the rejection of dependent Claims 11 and 15 under 35 U.S.C. § 103(a) be duly overruled.

The Examiner has selected elements from prior art references, none of which suggest operation as a fire barriers. Applicant asserts that the motivation to combine the prior art references has come from the claimed invention, not the references themselves.

“[I]t is impermissible to use the claimed invention as an instruction manual or ‘template’ to piece together the teachings of the prior art so that the claimed invention is rendered obvious. . . . This court has previously stated that ‘[o]ne cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention.’” *In re Fritch*, 23 USPQ 2d 1780, 1784 (Fed. Cir. 1992).

Appellants respectfully assert that if the prior art of record so clearly demonstrates the obviousness of the claimed invention, a single reference would teach more than just one or two elements of the claimed invention. However, the formation of the combinations used in the rejections is indicative of impermissible hindsight analysis by the Examiner. The number of references used also seems to indicate that the claim terms were used in a key word search of the prior art. Once a key word hit was found, there appears to be little analysis performed to determine the applicability or relevance of the reference. This approach is indicative of hindsight keyword analysis. Appellants respectfully assert that because such analysis is improper, the rejections should be overturned.

#### B. Independent Claim 20

Claim 20 is directed to a barrier protecting an object from fire substantially similar to the fire barrier of Claim 1 described above. Therefore, Appellants submit that Claim 20 is patentable for at least the same reasons as Claim 1 above. Additionally, Claim 20 is directed to a mixture comprising at least 50% bentonite. Therefore, Appellants submit that Claim 20 is patentable for



at least the same reasons as Claim 13 above. Appellants request that the rejection of independent Claim 20 under 35 U.S.C. § 103(a) be duly overruled.

**III. The Examiner failed to establish a *prima facie* case of obviousness under 35 U.S.C. § 103(a) because *Stuber*, *Dentler*, and *Fairchild*, either alone or in combination, do not teach or suggest all of the limitations of Claim 18.**

**A. Dependent Claim 18**

Given that Claim 18 depends from independent Claim 13, which is believed to be patentable as described above, Appellants respectfully submits that the rejection of Claim 18 under 35 U.S.C. § 103(a) is moot. *Stuber* and *Dentler*, either alone or in combination, fail to teach or disclose a method for protecting an object from fire as described above. A *prima facie* case of obviousness requires that the prior art teach or suggest all claim limitations. MPEP §2143.03.

The Office Action relies on *Fairchild* in rejecting Claim 18. However, *Fairchild* does not teach a method for protecting an object from fire including “preparing an area surrounding an object . . . to keep vegetation outside the area from igniting the object” as described above. *See* Claim 13.

Therefore, because *Stuber* and *Dentler* fails to teach each element of independent Claim 13 and the missing elements are neither taught nor suggested by *Fairchild*, Appellants submit that Claim 18 is nonobvious over *Stuber*, *Dentler*, and *Fairchild* alone, or in combination. Accordingly, Appellants request that the rejection of dependent Claim 18 under 35 U.S.C. § 103(a) be duly overruled.

### SUMMARY

In view of the foregoing, each of the claims on appeal has been improperly rejected. The Examiner has not properly established a *prima facie* case of obviousness for Claims 1-10, 12-14, 16-17, and 19 in view of *Stuber* and *Dentler*. Similarly, the Examiner has not properly established a *prima facie* case of obviousness for Claims 11, 15, and 20 in view of *Stuber*, *Dentler*, and *Toon*. Finally, Examiner has not properly established a *prima facie* case of obviousness for Claim 18 in view of *Stuber*, *Dentler*, and *Fairchild*. Appellants submit that the foregoing arguments establish the non-obviousness of the claims of the present application. Accordingly, Appellants submit that Claims 1-20 are patentable. Therefore, Appellants respectfully request reversal of the Examiner's rejection of Claims 1-20 under 35 U.S.C. § 103(a) and allow pending Claims 1-20.

Respectfully submitted,



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## 8. CLAIMS APPENDIX

The claims involved in the appeal are listed below.

1. A fire barrier protecting an object comprising:  
  
an organic bentonite-based material;  
  
an outer boundary surface disposed to retain the material in a selected location, the location at least partially surrounding the object;  
  
wherein the organic bentonite-based material is disposed within the outer boundary surface such that a top surface of the material remains uncovered and exposed to the aboveground environment after disposing the bentonite-based material within the outer boundary; and the organic bentonite-based material forming a region about the object, the region configured to prevent plant growth and thereby protect the object from fire.
2. The fire barrier of claim 1, wherein the boundary surface comprises a retaining device configured to retain the material.
3. The fire barrier of claim 1, wherein the object comprises a pole.
4. The fire barrier of claim 3, wherein the material is disposed surrounding the base of the pole.
5. The fire barrier of claim 3, wherein the material is disposed around the pole extending outward from the pole a distance of between about 6 inches to about 10 feet.
6. The fire barrier of claim 3, wherein the material is disposed around the pole extending outward from the pole a distance of between about 2 inches and about 5 feet.

7. The fire barrier of claim 3, wherein the material is disposed around the pole extending outward from the pole a distance of about 3 feet.
8. The fire barrier of claim 3, wherein the material is disposed around the pole to a depth in the range of between about .25 inches and about 4 feet.
9. The fire barrier of claim 3, wherein the material is disposed around the pole to a depth in the range of between about 4 inches and about 2 feet.
10. The fire barrier of claim 3, wherein the material is disposed around the pole to a depth of about 8 inches.
11. The fire barrier of claim 1, wherein the boundary surface comprises a annular plastic sheet.
12. The fire barrier of claim 1, wherein the boundary surface comprises the edges of a depression.
13. A method for protecting an object from fire, said method comprising:  
  
preparing an area surrounding an object for receiving an outer boundary surface, the area extending from the object a distance suitable to keep vegetation outside the area from igniting the object;  
  
disposing the outer boundary surface to retain a material in a location, the location at least partially surrounding the object; and

depositing an organic bentonite-based mixture comprising at least 50% bentonite within the outer boundary surface, a top surface of the bentonite-based mixture remaining exposed to the aboveground environment after disposing the bentonite-based mixture within the outer boundary surface, the bentonite based mixture creating a hostile growing environment for vegetation.

14. The method of claim 13, wherein preparing an area comprises excavating a depression about the object for holding the mixture.

15. The method of claim 13, wherein providing an outer boundary surface comprises installing a circular plastic sheet configured to retain the mixture.

16. The method of claim 13, wherein depositing the mixture further comprises depositing the mixture in a radius about the object.

17. The method of claim 13, further comprising depositing the mixture and forming an upward slope towards the object.

18. The method of claim 13, wherein depositing the mixture further comprises pumping the mixture from a source.

19. The method of claim 13, further comprising adding bentonite to the bentonite based mixture in response to signs of vegetation growth within the bentonite based mixture.

20. A barrier protecting an object from fire comprising:  
an organic object;

an organic bentonite-based mixture comprising at least 50% bentonite and up to 50% soil;

an annular plastic sheet disposed to retain the mixture in a selected location, the location at least partially surrounding the object;

the mixture is disposed around the object, between the plastic sheet and the object such that a top surface of the mixture remains uncovered and exposed to the aboveground environment after disposing the bentonite-based mixture between the plastic sheet and the object, and extending outward from the object a distance of about 3 feet and to a depth of about 8 inches; and

wherein the organic bentonite-based mixture creates a hostile vegetation growth region about the object, absorbing water and maintaining a salinity level toxic to vegetation thereby protecting the object from combustion of vegetation within the location.

## **9. EVIDENCE APPENDIX**

There is no material to be included in the Evidence Appendix.

## **10. RELATED PROCEEDINGS APPENDIX**

There is no material to be included in the Related Proceedings Appendix.